

## APPARATUS AND METHOD FOR AUTOMATED INTERCONNECTION AND DISCONNECTION OF DISK DRIVE CARRIER IN A SYSTEM

A disk drive having an optical signal connector and a magnetic power coupling is placed in a drive carrier. The bottom of the carrier has a recess with a transverse pin mounted in the recess. A pair of small magnets are mounted near the rear of the carrier. The carrier slidably mounts in the drawer of a disk drive library. The drawer has an optical signal connector and a magnetic power coupling that mate with those of the disk drive. The drawer also has a sensor for detecting the magnets on the carrier, and an eject button for manually ejecting the carrier. In addition, a drive mechanism is mounted in the bottom of the drawer for engaging the pin on the bottom of the carrier. Although the carrier may be manually inserted or removed from the drawer, the disk drive library can also perform these functions automatically. The automated sequence is accomplished by inserting the carrier into the drawer until the pin engages the drive mechanism. When the sensor senses the first magnet, the system actuates the drive mechanism to pull the carrier completely into the drawer such that the connectors and couplings interconnect. Proper registration of the carrier in the drawer is verified when the sensor senses the second magnet.